

1 Your rural library budget that's
2 fifteen and twenty, is that going to bother you
3 then? And how might that be addressed? How --

4 MS. ZUSSY: You're quite correct
5 that it is an ongoing problem, particularly as
6 staff turns over and we get new staff that has to
7 be trained. There's two rays of hope here. One of
8 them is the state library does provide training in
9 a modest way to libraries, local libraries. We put
10 on seminars, we have two people on a technology
11 team that give some support to people, but it's
12 only two people.

13 The other almost ironic thing is, for
14 the first time in history, librarians are finding
15 that their users, particularly their younger users,
16 know more about this technology than the
17 librarian. And one way to harness that, and
18 Seattle has this program to the extent that they
19 went into it, they're attracting young people,
20 particularly from some of the less affluent parts
21 of the city, to come and get their network manager
22 credential, Microsoft, through the library. And in
23 return for that, they have to troubleshoot for the
24 libraries, the branch libraries. So it's a win-win
25 situation.

1 MR. GILLIS: Several years ago, I
2 remember having a conversation with a librarian in
3 a different state, and they were talking about
4 their vision of libraries without walls, some sort
5 of technology would be the answer, that they saw
6 the role of libraries not so much as a building
7 where we have terminal access, but the role of
8 libraries is that of an educational institution
9 that helps people tap into information wherever
10 that might be.

11 I'm just curious as to your reaction
12 for the solution for the library system, whether
13 that makes sense as opposed to the more traditional
14 model, that being you might have terminals on the
15 tables in the library and that being the second
16 purpose.

17 MS. ZUSSY: I wish I could tell you
18 that that's wonderful and all of this technology
19 would replace books and primitive matter. I don't
20 see that it's going to happen. I think what is
21 happening is that people wanted it both ways.

22 They would like to be able to sit down
23 in their jammies, so to speak, and inquire at home
24 and get into the library at two in the morning when
25 they can't sleep, and the kids are able to do

1 that. If they'd like to come to work very early or
2 very late and access things that they need, such as
3 federal rules and the regulations, they can do that
4 through the library at any time day or night.

5 But there are also people who want to
6 come in and go through back runs of six or seven or
7 eight years of journals and such. I think we're
8 going to have to accommodate all people. The
9 concept of libraries without walls is not a
10 replacement, it's an augmentation. It's going to
11 be a way to make service available on demand at any
12 sort of site, including coming to the library.

13 Attendance at libraries is by no means
14 down. It's a changing and really fun time to be a
15 librarian.

16 MR. GILLIS: Thank you.

17 MR. KING: Thank you. Nancy Zussy
18 was the only person that signed up who said that
19 they wanted to speak. That may be evident by
20 something I once read that people are more afraid
21 of speaking in public than they are of their own
22 death. But I'd like to use some gentle peer
23 pressure, if I could, to see if I could convince
24 some of the six people who are here from other
25 school districts or schools to see if they'd be

1 interested in speaking.

2 MR. HASKETT: My name is Jim
3 Haskett. I'm director of telecommunication
4 services here at the Central Washington
5 University.

6 CHAIRMAN NELSON: Could you spell
7 your last name for the court reporter?

8 MR. HASKETT: H-A-S-K-E-T-T. There
9 are some things that higher education is doing in
10 this state on matters of corporate projects that
11 may be of interest.

12 I'm sure you're all aware of some of
13 the projects and where that's headed and what the
14 opportunities and problems are there. There's
15 another project that's underway now that's called
16 the Corporate Library Project, CLP, that is being
17 coordinated by the council of presidents.

18 The six four-year schools in this state
19 are trying to provide all of our, quote, card
20 catalogues as what are called a joint, or --
21 Please, joint --

22 MS. ZUSSY: Uh-huh. Or a union.

23 MR. HASKETT: Union. Union
24 catalogue. We have a pilot project going now, the
25 University of Washington and Western Washington

1 University and I believe WSU have a -- the very
2 preliminary part of this project going so that in
3 the end, any faculty member and any student at a
4 four-year institution, public four-year
5 institution, in this state will be able to see the
6 card catalogue at any of the other schools.

7 And ultimately, you'll be able to check
8 out books and etc. from not only your own
9 institution, but from the other institutions. And
10 the ways of help will be transparent. The user
11 will not know that the catalogue being seen is at
12 the University of Washington rather than Central
13 Washington University. Lots of problems associated
14 with that inter-library, and it's a very costly
15 thing to support.

16 Two weeks ago, we met with many
17 technical colleges to see what their interest is in
18 joining us, and we also met with a representative
19 from one of the private school institutions to see
20 whether they're interested. Needless to say,
21 there's a lot of work ahead of us.

22 I'd like to talk just a bit about
23 something called student center learning. For
24 years those of us in technology have talked with
25 capital planners, architects, consultants, and

1 contractors about the role that technology plays in
2 capital projects. Several years ago, I saw a
3 document that talked about capital process, how you
4 go about funding capital projects, what's needed in
5 them, the process or design, consulting, etc. And
6 this could be no more than say two or three years
7 ago.

8 . . . I was struck that the only reference to
9 information technology in that document was the use
10 of the word telephone twice. There was nothing
11 about fiber-optics, nothing about communication
12 clauses, etc. And I notice here that when we work
13 on major capital projects, the science facility,
14 the Black Hall, the faculty and the architects and
15 the consultants want us to talk about what kind of
16 computers go in the labs, should we get MacIntosh
17 or should we get PCs, how big should memory should
18 be, how big discs should be, etc.

19 And what we try to get them to believe
20 is that the only thing we can tell them five years
21 in advance is it's going to cost about \$3500 a
22 pop. But somehow the belief is, if we get the
23 computers in there, all the rest of it will come in
24 behind.

25 This summer I went to a computer

1 conference. And in fact it was two conferences, it
2 was back to back conferences. And when I got to
3 the first one and saw the agenda, I wondered why I
4 had signed up. About 40 people were at this
5 conference, a third of us were higher ed computer
6 types, two-thirds of us were academic
7 administrators and faculty.

8 . . . There were people there that talked
9 about the role of technology and student center
10 learning, and I have waited 25 years to hear these
11 words. There's a man at MIT that teaches
12 artificial intelligence named Marvin Minsky. And
13 he said something about learning that is dear to my
14 heart. He says you don't understand something
15 until you understand it in more than one way.

16 And we've all had this experience. In
17 high school, we studied that $A^2 + B^2 = C^2$ equals C square, and we studied that in algebra.
18 And later on, we saw that same thing with triangles
19 in geometry classes. We're starting to see that in
20 exceptional ways in higher education.

22 And there's another example that maybe
23 means more to me, because I live in this state, but
24 also because my education is in physics, and that's
25 about technology in physics education. We've all

1 seen the film clip of the collapse of the Tacoma
2 Narrows Bridge. When you're in graduate school
3 studying differential equations in physics, we see
4 those equations, we have scholars in front of us
5 who have studied differential equations for years,
6 and they talk about the equations.

7 There's a man named Jack Wilson, who is
8 curiously a physics professor, dean of
9 undergraduate school, and dean of continuing
10 education school. And when he talks with his
11 students about the differential equations, he has
12 them turn around to their microcomputers and look
13 at the equations, take his scholarly view of them,
14 and then watch the collapse of the Tacoma Narrows
15 Bridge.

16 And he teaches them that you can plot
17 the equation of that bridge. When you stop action,
18 plot the bridge, run it forward a few frames, plot
19 it again. And low and behold, the equations do
20 indeed describe what happened to the Tacoma Narrows
21 Bridge.

22 The point of all this is there are
23 people at the University of Illinois, University of
24 Southern Florida, Virginia Tech, who really
25 understand what it means to put technology into the

1 classroom. And it builds a very, very rich
2 environment so that people see what Marvin Menskey
3 talks about. They see the same thing in different
4 ways.

5 And I remember in classes that weren't
6 very interesting to me, that I liked to sit in the
7 back row and slouch down in the seat, trying to
8 avoid eye contact with the faculty member. You
9 can't do that in high tech classrooms.

10 And in some cases they have what's
11 called studio classrooms that's built on the
12 principle of an art studio so that there are
13 computers behind the students. A faculty member
14 stands in front of the students, he or she lectures
15 a bit, has the students turn around, they have to
16 turn around to get to the machines. So when
17 they're facing the faculty members, they can't
18 fiddle with the machines. They do some small
19 exercise, and then they turn back around for the
20 next portion.

21 When the exercise is more complicated,
22 the faculty member walks among the students helping
23 them in small group settings. When you slouch down
24 in the back of the seat or when you get distracted
25 in the middle of the lecture, you might miss two

1 minutes that takes the rest of the hour out of
2 context.

3 But if you go home that night and you
4 think about what you saw in the classroom and what
5 you didn't learn in the classroom, go to your
6 computer in your dorm room, connect to that same
7 file server, and see that same material over again,
8 maybe it makes sense at three o'clock in the
9 morning, whereas it didn't at two o'clock in the
10 afternoon.

11 This fall the University of Southern
12 Florida will offer ten Bachelor's Degrees on line.
13 If you have a two-year degree, you can get a
14 Bachelor of Science or Bachelor of Arts in ten
15 different programs this fall. University of
16 Michigan is putting engineering degrees on the
17 internet.

18 I think if people have a choice between
19 getting a University of Michigan engineering degree
20 and getting a University of Central Washington
21 technology degree, that some of our students are
22 going to go to Michigan from their homes rather
23 than here.

24 The point is not the technology, the
25 point is that the technology provides a very, very

1 rich learning environment that appeals to people
2 with different learning styles, people who can't
3 come to campus, people who have children, that are
4 ill and miss a day. But most importantly, I think
5 it allows people who have a variety of things to be
6 taken care of and educated at a time, place, and a
7 mood that works for them.

8 I think this is going to explode. I
9 think this is -- I think computing is going to
10 deliver on the promise that we have failed to
11 deliver on for so many years. And I think the
12 place, the reason that's important here is
13 illustrated by something that we just did. We
14 recently upgraded our connections to our programs
15 from a 56 kilobyte line to a 384 kilobyte line.
16 That upgrade cost us \$40,000 a year, which we
17 hate. Somebody at this university doesn't have
18 \$40,000 that they used to have.

19 I think that as student center learning
20 pays off, that \$40,000 isn't going to touch it, and
21 so I see that subsidies for libraries and subsidies
22 for education is going to have a tremendous pay
23 off. At \$40,000 a pop, there's no way we cannot
24 afford it. Thank you.

25 MR. KING: Thank you, Mr. Haskett.

1 Do we have another willing volunteer?

2 MR. BELL: Well, I wasn't sure what
3 I was going to say, but just after reviewing the
4 questions and your comments or --

5 MR. KING: Could you introduce
6 yourself?

7 MR. BELL: I'm sorry. My name is
8 Al Bell, I'm director of technology and staff
9 development for Richland School District.

10 MR. KING: Thank you.

11 MR. BELL: Richland adopted a long
12 range plan for -- it's not really a long range plan
13 for technology, it's a vision we have about
14 teaching and learning in the 21st century. And we
15 took that very seriously. It took us two years to
16 develop that.

17 We engaged the community with us, with
18 our staff, to arrive at that, and it's something
19 that still serves us well today, even though it was
20 adopted in '93. Because it truly was a vision for
21 how learning and teaching would take place in the
22 next century, not just a plan for technology.

23 I brought some of these documents, and
24 I'll leave them with you. I don't know if they'll
25 be of use to you. There are some figures in there

1 that answer some of the questions that were in your
2 list. But this is our document, and it's something
3 that our public's more familiar with in a video
4 format. This is kind of articulated in vision and
5 words, but we also have a video that we did that
6 much more of our public got to see.

7 Since it became very apparent from
8 early on that communications was going to be an
9 important part of this vision, because early the
10 vision -- We had three goals. We were trying to
11 improve the quality of the learning, we were trying
12 to improve the way we were supporting that learning
13 and then the third thing, that third major goal
14 that evolved is we were trying to improve
15 communications, whether that was communications
16 within our organizations or communications with our
17 public, with our parents, it boiled down to
18 communications.

19 So it became clear early on that the
20 communications infrastructure was going to be
21 important and that was something that we didn't
22 have a lot of. So we brought in an outside agency,
23 Digital Network Architects, to come in and do a
24 study of our information system.

25 And they looked at our needs, what we

1 were trying to do, and they looked at our
2 communication system. And they helped us assess
3 where we were and looked at our vision, our long
4 range technology plan, and arrived at some
5 scenarios for how to get the technology
6 infrastructure, the communications infrastructure,
7 in place to do what we wanted to do in the 21st
8 century..

9 So that was important to us. These are
10 some evolutionary steps I'm walking you through to
11 where we've gotten today. The other thing that was
12 important for our board of directors and our
13 community was knowing that we were making progress
14 or knowing whether or not we were making progress.
15 So we took the science of benchmarking very
16 seriously, and we established some benchmarks.

17 So on a year-to-year basis, and
18 actually we're just doing it for the fourth year
19 now, measuring things like student access to
20 computers; teacher access to the computers;
21 surveying the actual use, not just access, but how
22 are they using them, for what purposes, both
23 students and teachers; how much staff development
24 is being done, is that need being met; involvement
25 and support for the planning at the district level

1 and at the school level, because there's planning
2 going on at all different levels in our
3 organization.

4 And our benchmarks include, you know,
5 measuring whether or not we've had support for it,
6 for that planning, and then reporting those to the
7 board of directors on an annual basis on those
8 kinds of things. Those are some of the things that
9 kind of evolved from our early work with this, what
10 started out as just a vision for learning in the
11 21st century.

12 What we got into very quickly was, as I
13 said, it became clear our infrastructure or the
14 lack thereof was a major obstacle, the classrooms
15 basically. There was no service to the classroom.
16 We had phone service to the school, but very little
17 being delivered to the classrooms. And our vision
18 for learning in the 21st century, an awful lot of
19 it was based on students and teachers accessing
20 data and information.

21 And what they have to do now, or not
22 now, but back then, was go down to the library.
23 That could have been the public library or that
24 could have been the school library. Other than the
25 textbooks, there wasn't a lot in the classroom

1 itself. So we started going about trying to put
2 some of that infrastructure into place in our
3 schools.

4 And I'll tell you, we haven't found a
5 way to do this with operational monies. I think
6 most of our school districts are in the same
7 position. The time that you can get serious about
8 putting infrastructure in schools is you have two
9 opportunities; one, any time you're building a new
10 school obviously, and schools that aren't
11 budgeted.

12 Our experience, just in terms of
13 talking to a lot of people in the Northwest, but
14 also really across the country too on this, but our
15 experience tells us that you're going to be
16 spending between eight and eleven dollars per
17 square foot to put in the infrastructure that you
18 need to do it; data, voice, and video.

19 You're going to, if you're renovating,
20 you're going to be spending about ten to fifteen
21 thousand dollars per classroom to put, again,
22 infrastructure in place to do all three. And we've
23 not been able to do it this way. We had a limited
24 amount of money that was set aside from one of our
25 bonds for a modernization project. I should add

1 that that modernization of that middle school was
2 done well, it was our first school for the 21st
3 century.

4 So we think we handled data, voice, and
5 video at this one school, but the problem is that's
6 only 30 classrooms in a district with about 400
7 classrooms. So we have an equity problem that
8 we've created, and we knew that going into that.
9 So what have we been doing about the other
10 classrooms?

11 Well, we had a proposition to the board
12 after this, after we arrived at this fight to do
13 something, for about three million dollars that
14 would impact all the classrooms, and again doing
15 data, voice, and video. That got pared back. It
16 was a political decision and it got pared back to
17 about \$600,000.

18 And so what we ended up doing, and we
19 had to make a tough choice, we could maybe just do
20 a couple facilities and do data, voice, and video,
21 or, and this is what we ended up deciding to do,
22 because we weren't sure if there was really going
23 to be a technology levy in our future, we knew we
24 were -- this was a community that was looking at a
25 lot of job loss.

1 And back then, back in '94, we knew it
2 was around the corner, we didn't know how many, but
3 at that time, we had about 18,000 jobs out at the
4 Hanford area. And we didn't know it, but we were
5 going to get cut about 5,000 jobs, 4800 to be
6 exact. And so that was around the corner, and
7 there was uncertainty of all that. So it didn't
8 look like to us this was the time to ask the
9 community to do this technology bond or this
10 technology levy.

11 So we did all of this with this
12 \$600,000 that was set aside from one of these
13 school construction projects. And what we ended up
14 doing was pulling two cap five cables to every
15 classroom across the district. We knew that was
16 only going to be for data and voice or maybe just
17 strictly data. It's really kind of up to us to
18 decide.

19 At this point we're not using that
20 second one that we've pulled to the classroom.
21 We're just kind of reserving that, kind of for a
22 future decision. But we felt that pulling that
23 kind of equipment, that kind of infrastructure, as
24 light as it was, as thin as it was, it was
25 significant, because it did impact all the lines

1 basically across the district.

2 With that little bit of money in and
3 the bond, we were able to start doing things with
4 our operational monies. But this is very difficult
5 kind of stuff to do, and it's the same money that
6 you could be using to buy computers for students to
7 use. So it's buying hubs and buying routers, you
8 know. It just doesn't do a lot for teacher access
9 for computers. Wonderful things for giving them
10 internet access, but it doesn't help the ratios
11 out, and that's what's most visible to the public.

12 Our newest goals, our community goals,
13 we still call the schools that we built in the '70s
14 new schools. Our new high school was built in
15 1971, and my guess is there's probably a lot of
16 communities that talk that way about their new
17 schools.

18 I don't know who was responsible, I
19 wasn't in the rank, in fact, I graduated in 1970,
20 so -- but I don't know who was around. We knew
21 electricity was a good thing. I don't know why we
22 don't have more outlets in those schools that were
23 constructed in that time frame.

24 I mean, we knew electricity was a good
25 thing, but there's not a lot of difference between

1 the schools that were constructed in the '50s,
2 looking back at it now in our district's inventory,
3 there's not a lot of difference between the schools
4 that were built in the '50s and '70s, other than
5 they've got better air-conditioning and heating
6 infrastructure in place. But as far as
7 electricity, you know, it's about the same
8 situation:

9 I was reading somewhere that 90 percent
10 of our first graders, today's first graders, are
11 going to graduate and attend schools that are
12 already built. So while school districts get very
13 excited about new school construction, the reality
14 is the most serious work ahead of us is going back
15 and putting infrastructure in place in the schools
16 that have already been built.

17 And I have a feeling it's not just
18 those schools in the '70s. Prior to being in the
19 Richland School District, I was director of an
20 information technology center in Spokane which
21 serviced 59 school districts. And we were doing
22 technical consulting with those school districts.

23 And I have a feeling that an awful lot
24 of the schools were constructed in the '80s, maybe
25 with more outlets, but certainly not with the idea

1 of putting data infrastructure in place. And so
2 this is a real big problem for schools.

3 So I know you're here to talk about
4 rates, but I'm telling you that an even bigger
5 problem, and I realize this isn't your problem, but
6 a bigger problem for us is, quite frankly, going to
7 be to put that infrastructure in place to take
8 advantage of whatever you might provide at the
9 either free or low reduced costs to us, and it's
10 very, very tough.

11 I say that coming from a town that was
12 a government town too, and I frequently have to
13 remind our community, we have to pay our way, but
14 there's a great section of our community in
15 Richland that remembers the government coming out
16 and changing their light bulbs, the government
17 coming out and filling up the oil tanks. Those are
18 the kinds of things you had to do to bring people
19 in and keep them there to work on the Hanford
20 project back in the '40s.

21 And an awful lot of those people are
22 still around, and they built our schools for us
23 too, incidentally. We didn't start building our
24 schools until the 1970s. And the reason I share
25 that with you, that's the environment I have to go

1 out and sell doing modernizations, sell doing new
2 school construction, and a big part of our
3 community, they remember those days when the
4 government built our schools, so they're not used
5 to paying those kinds of things.

6 So these aren't pleasant cases to
7 make. I'm just going to kind of leave that story
8 with we ended up spending, just to pull two cap
9 five to the classroom, that averages when you
10 figure that out per classroom, about \$15,000 to do
11 that.

12 CHAIRMAN NELSON: Per classroom?

13 MR. BELL: Yeah. And that's just
14 minimal. And that's just committing the racks, the
15 wiring costs. That's not your hub, it's not your
16 routers. Just the wire basically and the pulling.

17 I just want to talk about a little bit
18 about our libraries. Back even before this vision
19 for learning was formulated, we started networking
20 on to those information rich areas in the school.
21 One is the school office, the other one is the
22 library.

23 And actually our libraries have been
24 automated. We've had electronic card catalogues
25 for four years now. We've had CD rom towers,

1 actually providing more and more CDs in towers
2 every year. We started with just the secondaries,
3 actually this year, now every single school has CD
4 rom towers.

5 That's where it's kind of nice now that
6 we've pulled that wire to the classroom, because
7 now students can be searching that card catalogue
8 or searching those CDs in the classroom. That's
9 just starting to happen now. Just because we've
10 finished pulling the wire to the classroom and
11 purchasing the hubs that you've got to put into
12 place. It's changing the role of our librarians
13 greatly.

14 Some are embracing it and they
15 absolutely love it. Some aren't. Some went to the
16 library to get away from the kids, and now they're
17 coming back. But actually that's all untrue. In a
18 couple cases, most of our librarians are really
19 enjoying all the kids in the classes coming in and
20 using the library even more.

21 I'm just going to finish up on a couple
22 of comments. I'm working with other agencies and
23 we do everything we can to try to leverage our
24 dollars, make our dollars go farther. We work with
25 the Department of Energy and the prime contract for

1 Hanford, which was -- it'll be Westinghouse until
2 September 30th, and then another contractor takes
3 over.

4 Just to give you an example of that, we
5 have an inventory in our district of about 1600
6 computers, about 300 of those are surplus computers
7 we've gone out and gotten from Westinghouse. I
8 won't tell you that that's at no cost. We don't
9 pay anything for the hardware, but we do end up
10 paying money for networking interface cards,
11 licensing interface cards. It adds up.

12 Almost costs about 300 per machine
13 every time we get one. That's certainly better
14 than getting a new one, but they're 386 vintage
15 machines. Those machines access the card catalogue
16 very well. They access the CD stuff too, not a lot
17 of it. And they certainly do our basic application
18 of word processing, so that has served us well.

19 We also just formed a consortium and we
20 were funded -- one of 14 consortiums funded by the
21 state office this last summer. Total in all the
22 grant is for 488,000. Some of that, we pitch in as
23 a district. There's another district too chipping
24 in, Kennewick School District, and Batelle.
25 Actually, Pacific North -- the Pacific Northwest

1 National Laboratory operated by Batelle. That's
2 the proper title. And WSU, Tri-Cities.

3 What that project is about, it's going
4 to impact five high schools, 15 classes in five
5 high schools, about 450 students. We're going to
6 be enhancing the teaching of technical
7 communication skills. And that's technical reading
8 and technical writing, and technical -- and doing
9 technical presentations.

10 We have a hard time sometimes working
11 that area in, because really what you need is
12 context to do some good teaching in this area.
13 That's what Batelle is going to provide us.
14 They're going to provide people with the
15 expertise. But they're also going to provide us
16 the real science, access to the real science that's
17 going on in their laboratories.

18 In fact, they're making available
19 software applications that they're developing for
20 the new world class molecular science center there
21 that's just being finished up. The idea is to get
22 access to this lab from all across the world,
23 whether you're in Amsterdam or Paris or whatever,
24 you work from your lab there. That same software
25 will be provided. We may not be doing the same